

Abstract of the Invention

A complete system and method for accurate and robust speech recognition based on
5 the application of three perceptual processing techniques to the speech Fourier spectrum
to achieve a robust perceptual spectrum and the accurate recognition of that perceptual
spectrum by projecting the perceptual spectrum onto a set of reference vowel spectrum
vectors for input to a speech recognizer. The invention comprises a perceptual speech
processor for perceptually processing the input speech spectrum vector to generate a
10 perceptual spectrum, a storage device for storing a plurality of reference spectrum vectors
and a phonetic feature mapper, coupled to said perceptual speech processor and to said
storage device, for mapping said perceptual spectrum onto said plurality of reference
spectrum vectors.